**EXPEDITED PROCEDURE – Art Unit 1765** 

Attorney Docket No. 108298758US Disclosure No. 03-0103.00/US

Amendments to the Claims:

Following is a complete listing of the claims pending in the application. None of the

claims have been amended in this response.

1. (Previously presented) A method for removing material from a microfeature

workpiece, comprising:

contacting a microfeature workpiece with a polishing surface of a polishing medium;

placing the microfeature workpiece in electrical communication with a first electrode and

a second electrode, the first and second electrodes being spaced apart from the

microfeature workpiece;

disposing a polishing liquid between the polishing surface and the microfeature

workpiece;

moving at least one of the microfeature workpiece and the polishing surface relative to

the other;

passing electrical current through the electrodes and the microfeature workpiece to

remove material from the microfeature workpiece while the microfeature

workpiece contacts the polishing surface;

passing at least a portion of the polishing liquid through at least one recess in the

polishing surface so that a gap in the polishing liquid is formed and located at

least partially in the recess and between the microfeature workpiece and a surface

of the recess facing toward the microfeature workpiece; and

controlling formation of the gap in the polishing liquid to achieve a desired

electropolishing rate.

2. (Original) The method of claim 1 wherein moving at least one of the

microfeature workpiece and the polishing surface relative to the other includes rotating the

microfeature workpiece.

3. (Original) The method of claim 1 wherein removing material from the

microfeature workpiece includes (a) removing at least a first portion of the material by

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electrochemical-mechanical polishing and (b) removing no material by direct electropolishing or

removing a second portion less than the first portion by direct electropolishing.

4. (Original) The method of claim 1 wherein the surface of the recess includes a

surface of the at least one electrode, and wherein passing at least a portion of the polishing liquid

through the recess includes passing polishing liquid through the recess with the gap in the

polishing liquid being located between the surface of the at least one electrode and a surface of

the microfeature workpiece facing toward the surface of the at least one electrode.

5. (Previously presented) The method of claim 1 wherein moving at least one of the

microfeature workpiece and the polishing surface includes rotating the polishing surface.

6. (Original) The method of claim 1 wherein moving at least one of the

microfeature workpiece and the polishing surface includes rotating the microfeature workpiece at

a rate of from about 10 rpm to about 500 rpm.

7. (Original) The method of claim 1 wherein moving at least one of the

microfeature workpiece and the polishing surface includes rotating the microfeature workpiece at

a rate of from about 50 rpm to about 200 rpm.

8. (Original) The method of claim 1 wherein moving at least one of the

microfeature workpiece and the polishing surface includes rotating the microfeature workpiece at

a rate of about 100 rpm.

9. (Original) The method of claim 1 wherein moving at least one of the

microfeature workpiece and the polishing surface includes rotating the microfeature workpiece at

a rate of about 100 rpm or more.

10. (Original) The method of claim 1 wherein disposing the polishing liquid includes

disposing the polishing liquid at a rate of less than one liter per minute.

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(Original) The method of claim 1 wherein flowing at least a portion of the 11.

polishing liquid through at least one recess includes flowing at least a portion of the polishing

liquid through a recess having a dimension generally normal to the microfeature workpiece of

from about 0.5 mm to about ten mm.

(Original) The method of claim 1 wherein flowing at least a portion of the 12.

polishing liquid through at least one recess includes flowing at least a portion of the polishing

liquid through a recess having a dimension generally normal to the microfeature workpiece of

from about two mm to about four mm.

(Original) The method of claim 1 wherein flowing at least a portion of the 13.

polishing liquid through at least one recess includes flowing at least a portion of the polishing

liquid through a recess having a dimension of about 0.375 inch generally parallel to a surface of

the microfeature workpiece in contact with the polishing surface.

(Original) The method of claim 1 wherein disposing a polishing liquid includes 14.

disposing a polishing liquid having TMAH.

(Original) The method of claim 1 wherein flowing at least a portion of the 15.

polishing liquid through at least one recess includes flowing at least a portion of the polishing

liquid through a plurality of intersecting recesses.

(Original) The method of claim 1 wherein contacting a microfeature workpiece 16.

with a polishing surface includes contacting a downwardly facing surface of the microfeature

workpiece with an upwardly facing polishing surface.

(Previously presented) A method for removing material from a microfeature 17.

workpiece, comprising:

contacting a microfeature workpiece with a polishing surface of a polishing medium;

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placing the microfeature workpiece in electrical communication with a first electrode and

a second electrode, the first and second electrodes being spaced apart from the

microfeature workpiece;

disposing a polishing liquid between the polishing surface and the microfeature

workpiece;

passing an electrical current from the first electrode through the microfeature workpiece

to the second electrode to remove material from the microfeature workpiece while

the microfeature workpiece is in contact with the polishing surface;

rotating at least one of the microfeature workpiece and the polishing surface relative to

the other;

passing at least a portion of the polishing liquid through recesses in the polishing surface

so that a gap in the polishing liquid is formed and located at least partially in the

recess and between the microfeature workpiece and surfaces of the first and

second electrodes located in the recesses, the gap providing a discontinuity in the

volume of polishing liquid between the surfaces of the first and second electrodes

and a surface of the microfeature workpiece facing toward the surfaces of the first

and second electrodes; and

controlling formation of the gap in the polishing liquid to achieve a desired

electropolishing rate.

18. (Original) The method of claim 17 wherein removing material from the

microfeature workpiece includes (a) removing at least a first portion of the material by

electrochemical-mechanical polishing and (b) removing no material by direct electropolishing or

removing a second portion less than the first portion by direct electropolishing.

19. (Original) The method of claim 17 wherein moving at least one of the

microfeature workpiece and the polishing surface includes rotating the microfeature workpiece at

a rate of about 100 rpm.

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20. (Original) The method of claim 17 wherein disposing the polishing liquid

includes disposing the polishing liquid at a rate of less than one liter per minute.

21. (Original) The method of claim 17 wherein passing at least a portion of the

polishing liquid through at least one recess includes flowing at least a portion of the polishing

liquid through a recess having a dimension generally normal to the microfeature workpiece of

from about two mm to about four mm.

22. (Original) The method of claim 17 wherein disposing a polishing liquid includes

disposing a polishing liquid having TMAH.

23. (Original) The method of claim 17 wherein passing at least a portion of the

polishing liquid through recesses includes passing at least a portion of the polishing liquid

through a plurality of intersecting recesses.

24. (Original) The method of claim 17 wherein contacting a microfeature workpiece

with a polishing surface includes contacting a downwardly facing surface of the microfeature

workpiece with an upwardly facing polishing surface.

25. (Original) A method for removing material from a microfeature workpiece,

comprising:

positioning a surface of a microfeature workpiece in contact with a polishing surface of a

polishing pad;

disposing a polishing liquid in contact with the surface of the microfeature workpiece;

passing an electrical current between first and second electrodes, through the polishing

liquid and through the surface of the microfeature workpiece, at least one of the

first and second electrodes being spaced apart from the microfeature workpiece;

moving at least one of the microfeature workpiece and the polishing surface relative to

the other; and

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controlling relative amounts of material removed from the microfeature workpiece via

electropolishing and via electrochemical-mechanical polishing by controlling an

amount of the polishing liquid that is disposed between the microfeature

workpiece and the at least one electrode but is not disposed directly between the

microfeature workpiece and the polishing surface.

26. (Original) The method of claim 25 wherein controlling relative amounts of

material removed from the microfeature workpiece includes directing at least a portion of the

polishing liquid through recesses in the polishing surface so that a gap in the polishing liquid is

located between the microfeature workpiece and surfaces of the first and second electrodes

located in the recesses, the gap providing a discontinuity in the volume of polishing liquid

between the surfaces of the first and second electrodes and a surface of the microfeature

workpiece facing toward the surfaces of the first and second electrodes.

27. (Original) The method of claim 25 wherein controlling relative amounts of

material removed from the microfeature workpiece includes (a) removing at least a first portion

of the material by electrochemical-mechanical polishing and (b) removing no material by direct

electropolishing, or removing a second portion less than the first portion by direct

electropolishing.

28. (Original) The method of claim 25 wherein moving at least one of the

microfeature workpiece and the polishing surface includes rotating the microfeature workpiece at

a rate of from about 10 rpm to about 100 rpm.

29. (Original) The method of claim 25 wherein disposing the polishing liquid

includes disposing the polishing liquid at a rate of less than one liter per minute.

30. (Original) The method of claim 25 wherein passing at least a portion of the

polishing liquid through at least one recess includes passing at least a portion of the polishing

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liquid through a recess having a dimension generally normal to the microfeature workpiece of

from about two mm to about four mm.

31. (Original) The method of claim 25 wherein positioning a surface of a

microfeature workpiece in contact with a polishing surface includes contacting a downwardly

facing surface of the microfeature workpiece with an upwardly facing polishing surface.

32-49. (Canceled)

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